

Description of Review Activities

The review workshop for the Chesapeake Bay blue crab assessment took place in Baltimore Maryland on March 29---31, 2011. On March 28 there was a Conference by the blue crab advanced research consortium which provided interesting background to the fishery but was not essential to the reviewers. The NOAA Chesapeake Bay Office provided the documents on a website for the Review (Appendix 1). After a request for the code in a form that could be run in ADMB and R, these were provided to the review team via the website.

The objective of the CIE Chesapeake blue crab review was to review and discuss input data, assumptions and parameters to the model, the assessment itself and the biological reference points for the population.

The Terms of Reference were:

- a) Critically assess, and where necessary revise, the life history and vital rates of blue crab in the Chesapeake Bay that are relevant to an assessment of the stock.
- b) Evaluate and recommend biological reference points for the Chesapeake Bay blue crab population. The potential for implementing sex---specific reference points should be evaluated.
- c) Describe and quantify patterns in fishery---independent surveys. Analyses should include an evaluation of the impacts of environmental and abiotic factors on survey catches, to maximize the information content of resultant survey time series.
- d) Describe and quantify patterns in catch, effort and survey---based estimates of exploitation by sector and region, including analyses that examine the impacts of reporting changes and trends in CPUE.
- e) Develop and implement assessment models for the Chesapeake blue crab fisheries. In particular, models that permit estimates of the trends and status of the crab population and fisheries on a sex---specific basis should be evaluated.
- f) Examine density---dependent exploitation patterns derived from survey---based and model---based approaches.
- g) Characterize scientific uncertainty with respect to assessment inputs and stock status.
- h) Evaluate stock status with respect to reference points.

The meeting was chaired by Dr Derek Orner of NOAA on behalf of the CIE review team, but the summary review was the view of the CIE panel members.

Dr Tom Miller gave a presentation on the first day of the review covering all aspects of the above Terms of Reference (ToR). On the second day, the review panel and assessment team discussed the research against each ToR. Upon request, the team provided additional documentation and information. The assessment team was extremely helpful in this review. The agenda for the review is provided in Appendix 2.

Additional information supplied:

1. Correction of the lagged plots provided in the report
2. Extra residual and predicted versus observed plots
3. Extra run with winter dredge survey as a relative index of abundance, and
4. Extra run using a standard Ricker stock---recruitment function.